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ABSTRACT

Intended for use with students in lower division technical writing courses, this list of over 800 suggested composition subjects is drawn from surveys of technical writing teachers as well as from teachers of science and technology. The suggested subjects pertain to 16 types of papers commonly presented in textbooks and articles dealing with technical writing instruction: (1) extended definition, (2) process without a conspicuous performer, (3) instructional ("how to"), (4) classification/partition, (5) comparison/contrast, (6) cause/effect, (7) description of a mechanism, (8) summary of a scientific or technical source, (9) inquiry or request, (10) complaint, (11) proposal for research, (12) analysis of a problem, (13) report of research progress, (14) library research report, (15) elementary empirical research, and (16) combination of library and empirical research. In addition, the listing provides a number of first and second preference suggestions, as well as subjects and sources for library research and composition suggested by Illinois State University faculty in the departments of agriculture, applied computer science, corrections, health science, home economics, industrial technology, biology, chemistry, geography-geology, physics, and science and technology. (HOD)

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Suggested Subjects of Composition for Lower-division Technical Writing

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U.S. DEPARTMENT OF EDUCATION
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CS 207 549

Suggested Subjects of Composition for Lower-division Technical Writing

Introduction

More and more technical writing courses are being offered at the freshman and sophomore level in the four-year college and the university as well as in the community college and the technical institute. Many students of lower-division technical writing in the four-year institution, however, have not yet developed specialized knowledge in their major fields. When asked to do papers relating to types of writing performed on the job, these students may experience difficulty in selecting subjects for composition. Ordinarily, students must find a subject of particular familiarity to them and adapt it to the specific requirements of the writing assignment. Without instructional assistance, students of lower-division technical writing, however, may not choose the most appropriate subject.

I believe that a list of suggested subjects enables students to examine their own experience and knowledge, not merely to recognize a given subject as suitable, but to help them in thinking of a related subject as a more effective one. Individual teachers are no doubt limited in the number of suggested subjects they can offer.

Therefore, I developed the present list of over eight hundred suggested subjects based on surveys of teachers of technical writing as well as teachers of science and technology. The suggested subjects pertain to sixteen types of papers commonly presented in textbooks and articles dealing with technical writing instruction.

Unless otherwise indicated, the suggested subjects were provided by over one hundred members of the Association of Teachers of Technical Writing who responded to my 1981 survey concerned with lower-division technical writing. Many members of this association are among the teachers of English in higher education who are most actively engaged in technical writing instruction. Additional suggested subjects for library research and composition derived from a survey of faculty in science and technology at Illinois State University. Many of those suggested subjects include sources recommended for research.

Some of the suggested subjects reflect specialized knowledge and are so classified in the listing. Thus, upper-division as well as lower-division students of technical writing may find this material useful as an aid to invention.

Suggested Subjects of Composition Based on Extended Definition

Familiar Subjects

A term from a job or hobby

Cigarette lighter

A term from a major field of study

Economy car

Map

Chart

Roommate

A good teacher

Graph

Plender

A device from a major field

Student

A student's major field

Potato peeler

Key

Paper clip

Felt pen

Ruler

Typewriter

A task to be done

Feedback

Snow

Dog

Specialized Subjects

Sextant

Word processing

A data processing term

Audience analysis

AC-DC conversion/energy

Offset printing

Micro processor

Transistor

A patrolman's offense report

Photosynthesis

Airfoil

Laser

Brake

Power

Extended Definition
Specialized Subjects (continued)

Energy

Soil horizon

Farrow to finish operation

BYTE

Horsepower

Resistance

Thermodynamics

Coma

Transit

Thermostat

Fission

Tolerance

Cancer

Tourniquet

Scientific method

Flow chart

Ecology

Computer

Estrogen

Windfall profit tax

Erosion

Cutability

Microcomputer

Nutrition

Carrying capacity

Analytical balance

Dialectric

Schizophrenia

Entrophy

Research

Ethics

Digital electronics

Robotics

Gyroscope

Memory

Suggested Subjects Based on Process Without a Conspicuous Performer

Familiar Subjects

Registration process for college

Toilet tank operation

Going from one campus building to another

Overhead projector

Bicycle in operation

Specialized Subjects

Stages of a biological or chemical process

Operation of a refrigeration unit

Research techniques for technical communication

Improving communication in an office

Budget process

Work plan

Silk screen

How a machine or device works

Manufacturing of paper

Desalinization of water

Making bricks

Administering a medical test

Ignition system of a car

Laboratory process

Internal combustion

How a microwave oven works

Silk

Communication cycle

Circulation of blood

Evaporation

Eutrophication

How radar works

Research, test method explained to management

How a thermostat works

Electronic circuits

Process
Specialized Subjects (continued)

Developing black and white film

A chemical analysis

How a haybaler works

Movement of stock through a warehouse to customers

How a cell divides

Operation of atomic power plant

Extending mental health services

How a college awards financial aid

Fermentation

Solar heating systems

Laboratory report

Osmosis

Volcanic eruption

Hydroponics

Germination and growth of a seed

Formation of cumulus clouds

Making cheddar cheese

Shipping explosives cross-country

Continuous casting

Growth of a tree

Suggested Subjects of Composition Based on Instructions

Familiar Subjects

Any process around home

Changing oil

Repairing household water faucet

Changing a tire

Refinishing furniture

Assembling a tinker-toy mechanism

Building a kite

Caulking a bathtub

Putting together a "Big Wheel"

Installing a vinyl floor

Making a peanut butter sandwich

Fixing a punctured tire

Playing a particular game

Baking a certain dish

Operating a can opener

Writing a check

Replacing a windowpane

A maintenance procedure

Checking out a library book

CPR

Saving a victim of choking

Reading a weather map

Tying a shoe

Assembling a bike

Jump starting an auto

Loading a stapler

Installing a dimmer light switch

Safety precautions

Operating a chainsaw

Specialized Subjects

Preparing a slide in biology

Preparing blood smears

Operating a machine

Shipping a printing plate

Developing a photograph

Changing a carburetor

Building a wooden fence

Using a voltmeter

Instructions
Specialized Subjects (continued)

Skiing safely

Reconditioning a boat

Simple auto body repair

Procedure for filling a syringe

Procedure for surveying property

Using a program in computer-assisted instruction

Tuning an engine

Self-arresting with an ice axe

Working a math problem

Clearcutting

Breaking a foal to halter

Building a solar greenhouse

Using a tachometer

Grafting on a tree

Setting up a transit

Setting up an apparatus

Designing a circuit

Operating an A B Dick ditto machine

Solving a linear equation

Taking care of a photocopy machine

Blowing glass

A job description

Calculating personal income tax

Calculating "current ratios" (business)

Tying fishing flies

Making bullets

Patient assessment

Installing moisture blocks

Assembling a chair for a carpenter/for a layman

Performing a particular experiment

Adapting a motorcycle for trail riding

Sorting mail

Operating a drill

Sharpening a chainsaw

Suggested Subjects of Composition Based on Classification/Partition

Familiar Subjects

Analysis of the parts of a desk-chair

Outlining from brainstorming

Coursework for degrees

Automobiles

Tape decks

Types of nightclubs

Uses of a college catalog

Majors in a field classified by reason for choosing the major

Simple cameras

Books in a library

Camping gear

Application letter/resume

Types of students

Specialized Subjects

Types of electric generators

Types of fishing vessels

Types of offshore oil platforms

Types of fog

Automobile principal assemblies

Types of attenuators

Kinds of computers

Modern industry organization

Potential of solar or wind power sources

Career available for the AB degree holder

Computer languages (e.g., COBOL, BASIC)

Nursing specialties

Cattle

Tools in a workshop

Identification of plant materials

Ammeter

Capacitance

Table of elements

Preparing a table of contents for a technical report

Periodicals in major field

Considerations for selecting a construction site

Engineering terms

Classification/Partition
Specialized Subjects (continued)

Allied health services

Types of technical audiences

Selling techniques

Parts of a tool

Specific job description

Lab equipment

Types of concrete

Types of smoke detectors

Types of wrenches

Types and components of pocket calculators

Outboard engines

Kinds of computer software

Set of variables

Evaluation of texts in a field

Steel beams

Documentation

Kinds of business machines

Rejection letter

Poems

Jobs in a given specialty

Suggested Subjects of Composition Based on Comparison/Contrast

Familiar Subjects

Two instructors

Auto specifications

Two brands of jogging shoes

Two brands of bicycles

A human and an apple

High school vs. college

Types of cookies

Felt tip vs. ball point pens

Prices at local chain stores

University parking lot use at 9:00 A.M. vs. 3:00 P.M.

Courses in and out of major

Summer and winter in . . .

Specialized Subjects

Feasibility report: contrast two pairs of skiis

Purchasing computers

Two screening tests for sickle-cell anemia

Mechanical typewriters vs. word processors

Offset and letter press

Leasing vs. buying cars

Two types of engines

Time study of two methods of baking bread

Two methods of removing a pressure regulator

Two computer languages

Solar power and wind power

Cross-country vs. alpine skiis

Radial and conventional tires

Airplane wing with sail on a boat

Types of insulation

No till vs. conventional tillage methods

Two storage-building designs

Engineering terms (definitions)

A technical vs. a non-technical article on same subject

Two kinds of weather reports

Formal article vs. formal report

Comparison/Contrast
Specialized Subjects (continued)

Case study on feasibility of two conflicting proposals

LED vs. LCD for electronic displays

Passive vs. active solar energy

Good vs. poor memos

Student vs. professional writing

U.S. vs. British education

Offerings at two technical schools

Diesel vs. gasohol as fuel

Two species of pine trees

COBOL vs. FORTRAN

U. S. Grant vs. Robert E. Lee

Inflation and deflation

Tolerance levels in X and Y

Suggested Subjects for Composition Based on Cause/Effect

Familiar Subjects

Why divorce rates are so high

Pressing a key on a typewriter to cause an imprint on paper

X number of ways to lose your job

The parking lot jam up

How a sailboat sails

What determines the price of beer at student center bar

Grading system (A, B, C, D, E) of colleges

Causes of student disinterest in cultural activities

Why is your last report late

Late drop and add (college courses)

Late registration

Why student drop-out rate is high

Specialized Subjects

Shrinkage of tillable land in the U.S.

Benefits derived from changing a manufacturing procedure

Effects of using leaded gas in a car specifying unleaded gas

Did expenditures in X result in improved Y

Business should be encouraged to locate in a specific area

Impact on hypothetical company if new employees were hired

Laser

The possible effects of a change in staffing patterns

Wastewater--determine how/why untreated effluent is entering a local river

The dangers of nuclear power plants

TV "ghosts"

Strip-mining

Contour farming

Magnetism

Chemical reaction

A trouble-shooting problem in student's major

Barometer

Cause/Effect
Specialized Subjects (continued)

Trouble report on a defective gear-grinding machine

Grade inflation

Why earthquakes occur

Accident analysis

Relation between health and leisure activities

Soil erosion

A case study on any organizational problem

Cause of failure of an experiment

A natural process

Impact of university on local economy

Consequence of using sunlamps for body tan

Whether a letter or a memo is appropriate

Letter of complaint on delivery of supplies

Benefits of auto safety devices

Curriculum changes

Explosives research

Function of spark plugs in an engine's effectiveness

Why does it rain

Effects of different exercises on heart rate

Gun control legislation

Suggested Subjects of Composition Based on Description of a Mechanism

Familiar Subjects

Vegetable peeler

Wrench

Potato peeler

Mechanical pencil

A child's toy

Electronic razor

Home-movie camera or projector

Gear mechanism on a ten-speed bicycle

Can opener

Ball-point pen

Flashlight

Wheel

Typewriter

Car jack

Xerox machine in college library

Pliers

Hand tool

Simple appliance

Screwdriver

Paring knife

Staple remover

Cheese slicer

Pizza cutter

Wine bottle opener

Egg slicer

Cigarette lighter

A level

Light switch

Lamp

Specialized Subjects

An organ of the body

Microscope

A clear-cutting logging mechanism

Spring-operated clock

Drafting instrument

Food-waste disposal

Electronic mixer

Oscillating electronic fan

Description of a Mechanism
Specialized Subjects (continued)

Linotype press

Oscilloscope

How a thermistor works

Automotive valve

The electronic automobile

A mailing tube

Army wrecker

Carburetor

Brake

Transit

Plane table

The inductive proximity sensor

The electro-mechanical system

The combine

Digital clock

Staple gun

Rivet tool

Safety device in nuclear power plants

Electron microscope

Radar equipment

A computer part

Resistor

Engineer's compass

Artificial limb

A lathe

A laboratory apparatus

Rube Goldberg contraption

Camera shutter

How a CAT scan works

Abney level

Suggested Subjects of Composition Based on Summary of a Scientific or Technical Source

On land faults

Abstracts of professional/ technical journal articles

An article from *Scientific American*

Impact of computers on learning

Summary of an article in student's field for lay audience

An essay from *Time*

Abstract of an article used for a formal paper

Research on solar heating

USDA brochure

Abstract of a technical report about germs

Article found through use of *Science and Technology Index*

Article in *Hoard's Dairyman* or *Concrete Design*

Chapter on formal report from a textbook

Chapter from a technical textbook

Recombinant DNA

"Hedging" in weather forecasting

Article in communication or media

Use technical description from Federal Register

Distinguish among precis, abstract, and summary

On cloning

"So You'd Like to Fly a Fighter Plane" in *Mills and Walter*

Book chapter on proposals or formal reports

Abstract on a student's research report

Article on word processors--units available for in-house typing, printing, camera-ready production

Thomas' *Lives of a Cell*; Selzer's *Mortal Lessons*

Source on an environmental issue

Communication satellites

Suggested Subjects of Composition Based on Inquiry or Request

Familiar Subjects

Job application

Inquiry to Chamber of Commerce about industries, job opportunities

Answering a help wanted ad

Arranging to tour a company

Finding out about a new product

Inquiring about a price

Letter of invitation

Obtaining travel information

Answering an inquiry or request

Making accommodations for a vacation

Requesting a letter of recommendation

Seeking information to apply for a bank loan

Requesting a catalog or price list

Specialized Subjects

On data for wind generators

Potential employment sites

Information to be used in a report

On job opportunities for women in computers

Letter with easy-to-answer questionnaire

Order letter for drafting pencils

Request and justify a staff addition

Request for interview (perhaps from an expert in the student's field)

On computers as money-saving devices for utilities

Asking for additional information on fellow student's proposal

On the effectiveness of interferon

On the methods in a successful program

Inquiry about admission to an academic program

Request for a progress report

Inquiry to a prospective publisher of an article

Inquiry or Request
Specialized Subjects (continued)

Information on alternative equipment to word processors

For an annual report of a corporation

Information on paper processing

To EICO for specifications on kits

Request permission to use printed matter

Suggested Subjects of Composition Based on a Complaint

Catalog order that was incorrectly filled

To a store concerning poor service

Small appliance failure

New car that doesn't run properly

Home office concerning a problem not helped at the local level

Describing a product that does not work (e.g., a broken stereo or toaster) with a focus on faulty design, workmanship, or material

A gripe with a specific solution

Concerning a wrong or incomplete order sent

Returning a defective part

Complaint about a personnel policy revision

A billing error

Damaged shipment

A delay in shipping

Disability check not received on time

Concerning a lack of cooperation

Lack of adequate parking space

Response to a given letter of complaint

A campus problem

"Bad news" letter

A disagreement with a professor

Seeking adjustment for damaged merchandise

Campus issue--letter to editor

Clarification of bank statement

To safety officer regarding fire hazard (e.g., in trash area)

To a dean regarding a course or school problem (e.g., food served in the dorm or library hours)

Notation to supervisor of on-the-line complaint (memo or letter)

Letter to editor about the sanitary landfill operation

Suggested Subjects of Composition Based on Proposal for Research

Wind-generated power

Offering credited, on-site courses to the imprisoned

Any ecological subject

Rental or purchase of vehicle or equipment

For technical report on computers in industry

On types of breast cancer

The need for a day-care center in a particular community

Prospectus on an experiment in plant fertilizer

A survey of salaries in a specific area or profession

Subject concerning a career field

Research paper on natural disasters

Problems in constructing underground homes

Abolish pass/fail grading process

A feasibility study

On the history and development of first-generation computers

Simulated proposal on an organization to a government agency or philanthropic organization

On research about safety of nuclear power production

Relating to a project in another course, such as a lab course

On danger of chemical wastes in the environment

On solar heating for domestic hot water

For a simple original survey of student attitudes on such topics as housing, knowledge of scholarship programs of the institution

On a study of emissions from a plant

To build a bridge

A study of fetal alcohol syndrome

A study on writing processes of professions in student's field

Feasibility of undergraduate courses

On whether an alternative bookstore on campus would be supported

A significant community problem

A study on manganese deficiency in horse diet (alfalfa)

A research on TV satellites

Proposal for Research
Suggested Subjects (continued)

Problem of drops/adds on campus

A study of job outlook in a field

Use of word-processing systems on local campus

Suggested Subjects of Composition Based on Analysis of a Problem

Familiar Subjects

Adequacy of campus security

What is wrong with the institution's registration procedure

Projected rise in tuition costs

Access of the handicapped

Inadequacy of lab equipment

Parking problem

Whether advisor approval is necessary for graduate student's courses

Investigation of intersection of highway noted for traffic accidents

How to organize a work crew

Lack of enough weekend organized social activities on campus

Feasibility of college-sponsored commuter bus

Vandalism on campus

An environmental, school, or work problem

Why students fail in college

Personality conflicts

Analysis of preregistration procedures

Specialized Subjects

The space program

Urban blight

Modernization of farming

Selecting best vehicle, piece of equipment

How a certain paper is best organized

Suburb encroachment on winter range of deer

Decreasing noise in and around airports

Windfall profits tax

Voice recognition by computers

Use of estrogen replacement therapy for menopausal women

Feasibility of opening a business, such as a hotel, in a certain city

Employee absenteeism

A problem relating to a research project in progress

Equipment trouble report

Analysis of a Problem
Specialized Subjects (continued)

A communication problem in an organization

Reducing heat loss in a house

A quality control question

Assembling the Rondesics Home

Increasing transportation expenses

Airplane safety

Nature of "no fault" auto insurance

Employee tardiness

Symbols for words

Why X% of campus students are registered voters

Dumping corrosive chemicals

Suggested Subjects of Composition Based on Report of Progress on Research

Familiar Subjects

Analysis of immediate plans

On a research paper or experiment on a given date--what has been done, what needs to be done, what problems remain

Materials gathered for a library research report

Progress to date on the student's degree

Specialized Subjects

Wind generated power

Building inspectors--inspection papers on code reviews

Researching locations for college classroom building

Reorganizing a business office

Crop production five-year study

Energy sources

New drug to combat hypertension

Effect of Federal cut in NDS loans on enrollment

In the composition course

On music therapy

Effectiveness of school's computer system

Economics of solar energy

Suggested Subjects of Composition Based on Library Research Report

Journalistic scare tactics about cancer

An environmental topic

Review of literature on job opportunities in a field

Usefulness of indexing systems compared: ERIC, Med-line, Reader's Guide, etc.

Performance of current year automobile

The future of some matter in a student's field

Preferred insulating methods for new houses

Usefulness of home computers

Converting your home to solar heating

Downtown shopping center decay

Interpretation of Census data

The Three-Mile Island problem

Cost Analysis

Purchase of some appliance

How bad was the drought of 1980

Development of equal opportunities statutes

Use of computers in the field of printing

Ten-year growth in student's major field

Robots in the auto industry

Evaluation of training methods: OJT, classroom, CCTV, programmed

What a draftsman needs to know about welding

A handbook for volunteer firemen acquainting them with basic arson investigation principles and techniques

Status of DMSO--Nursing Students

Suggested Subjects of Composition Based on Elementary Empirical Research

Renumbering system of buildings on campus

Consumer response to use of universal pricing codes

A cost-effective plain paper, copy machine

What are the housing needs of college students

Improved scheduling, college services for evening students

How much and what kinds of technical writing are used in a given place of business

A traffic count at a particular intersection

Marketing methods for spring dresses

Reasons for wide differences in utility costs

Evaluation of an employee

Eating or driving or studying habits of a group of students

Requirements of reporting by the electric utility industry to government

Student attitudes toward interracial marriage

Setting up a nonsmokers' lounge

Subject of academic concern, such as change in GPA for graduation

Lab report

What distribution of courses students choose

On a campus problem

Survey of attitudes on campus liquor regulations

Effectiveness of college admissions and orientation practices

Science instructors' frequency of writing

Where does a local supermarket place non-food items and why (interview manager, study floor plan, customer flow, etc.)

Day-care facilities in town

Grade inflation

Writing processes of professionals in a field

Measure degree of interest in legislation to restrict ownership of handguns

What kind of new restaurant is needed in town

A case study

Market survey for a new product

Suggested Subjects Based on a Combination of Library and Empirical Research

Advisability of opening a certain small business

Marijuana

Automatic thoroughfare

Analysis of the Kzar Wastewater Treatment System

Computer use patterns

Progress in implementing new gasoline vapor recovery devices

Use of smoke/heat detectors

Compare jogger survey to several published articles on jogging regarding best warm-up techniques

Local zoning problems

The employability of college graduates in certain fields

Feasibility of using solar panels to heat a local residence

Effective measures for improving productivity in one's place of employment

Use of movement theory in elementary classroom

Drugs

Abortion

Women's rights

Setting up a personal corporation after graduation

Need for new security measures on campus

Lab report

Practical applications of alternative energy sources

Selection of a gas-saving auto

Use of N/C shop machines in local industries

Telephone sales and collections

Wood as fuel

Desalinization of water

Reasons for decreases in prices of computers

Installation of a detection device to deter theft of electric typewriters, bicycles, etc.

A study of arc welder settings

A proposal to solve a problem at work

Population changes in a court during the past ten years

Importance of Federal aid to college students and to institutions of higher learning

Field report on evaluating merits of bridge vs. tunnel

Feasibility of use of a secondary or tertiary recovery technique in a permian basin oil field

Other Suggested Subjects for Composition

First Preference Suggestions[1]

Proposal for professional service landscaping

Pros and cons of in-class vs. homework assignments

Article for a magazine (general interest article for lay audience)

Formal technical article

Persuasive paper

A paper in another course as a paper also in English

Description of an organization familiar to the student

Analysis of conditions in a building concerning fire safety investigation

Operating instructions for a piece of industrial machinery

Job application and resume (16)

Report making prominent use of a visual aid (graph, table, chart)

Letter of transmittal for a hypothetical research paper

Analyze an essay to see who the audience is (5)

Practice outlining

News release on topic of a report

Instructions manual

Informational brochure (pertaining to a campus-related subject)

A study of a topic concerning the future

Review of literature

Description of a mechanism in operation

A group writing project (2)

Feasibility report (3)

Recommendation report (2)

Analysis of measures for improving productivity in a place of employment

Bibliography for a final report

Job description (3)

Abstract (2)

Oral report with letter of transmittal and abstract

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[1] Subjects from the first open-ended item provided to solicit other suggestions for composition. The numbers in parentheses indicate the number of survey respondents who suggested a given subject.

First Preference Suggestions (continued)

Report and outline of video taped oral technical report

Critical analysis of one's own writing skills and problems

Case study (for allied health students)

Design of forms, questionnaires

Condensation of a technical writing textbook

Letter responding to a question or complaint (2)

Project completion report

Second Preference Suggestions[2]

Problem/solution analysis of a company problem

Evaluation of another student's formal report

A standard memo

Informal communication: "thanks"--"no thanks"

Feasibility report

Proposal (2)

Editing pages from writing of industry to cut passives, nominalizations, dead wood, pomposity

Letter of adjustment for customer claim

Sales promotional piece

Job application and resume (8)

Operations manual

A survey of career options in a given field

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[2] Subjects from the second open-ended item provided to solicit other suggestions for composition. The numbers in parentheses indicate the number of survey respondents who suggested a given subject.

Second Preference Suggestions (continued)

A children's book based on a technical subject

Information report based on a visit to local business or industry

Rewrite of a technical article for a lay reader (3)

Formal technical paper

An action memo

A work order

Authorization for specified repair work on a defective vehicle

Abstract

Topic outline developed into sentence outline

Analysis of essay to determine whether it is technical writing

Rewriting an introduction or conclusion

Exercises on diction to emphasize clarity and conciseness

Oral report based on a research paper

Recommendation report

A paper in another course as a paper in English

Subjects and Sources for Library Research and Composition Suggested by Illinois State Faculty in the Department of Agriculture

Subject	Source
World population and food production	USDA publications available from Superintendent of Documents
Farm taxes (inheritance and income)	U.N. reports
Zoning and pollution regulations	Internal Revenue Service explanations
Gasohol	Department of Energy
Agriculture research	USDA publications
Agriculture statistics	Census and Illinois crop statistics
Formulating least-cost ration dairy rations, animal behaviors and management	Journal of Dairy Science; Journal of Dairy Research; Journal of Animal Science; Journal of Animal Behavior
Rural health and safety	National Safety Council Bulletins--Farm Conference; State-of-the-Art Report on Occupational Safety and Health in Agriculture, Institute of Agricultural Medicine (Oakdale, Iowa: University of Iowa, 1974)
Accident prevention on the farm and ranch	National Safety Council Bulletins--Farm Conference; Farm and Ranch Safety Management Kit, National Safety Council; Agricultural Machinery Safety by John Deere, Moline, Illinois
Energy for agriculture	Gasohol USA, Solar Energy Journal

Department of Agriculture Subjects and Sources (continued)

Subject	Source
Agricultural zoning	Soil Conservation Service
Any crop production area	Farm and scientific journals

Subjects and Sources for Library Research and Composition Suggested by Illinois State Faculty in the Department of Applied Computer Science

Subject	Source
History and development of programming, programming languages	ACM journals; Sommet-Programming Languages History and Fundamentals
Applications of computer-based design	Data processing journals; Computer-World
Should computers be used in the elementary school classroom? How or why not?	Computers and People; Microcomputing; Computer
Computerized crime or computer-aided law enforcement or whose side is the computer on--cops' or robbers'?	Computer-World; Thomas Whiteside, Computer Capers, Mentor Press
Structural systems analysis	Yourdon; Page-Jones
Development of micro computers	Byte and other micro journals
Micro computers applied to renewable energy sources	(Same as above)

Subjects and Sources for Library Research and Composition Suggested by Illinois State Faculty in the Department of Corrections

Subject	Source
Control and structuring of police discretion	Herman Goldstein, Policing a Free Society; Atkins and Pogrebin, The Invisible Justice System
The effects of higher education on police behavior and performance	(Goldstein source above)
Juvenile justice systems	
The social role differentiation in prison	
Rehabilitation of offenders	Presentence reports

Subjects and Sources for Library Research and Composition Suggested by Illinois State Faculty in the Department of Health Science

Subject	Source
Human behavior and its relationship to the health of the individual	Health Education Quarterly; Health Education; Journal of School Health; Journal of the American Health Association
Role of voluntary health agencies in the quality of life of a community	(Above sources)
Problem-oriented medical records	Index Medicus; Hospital Literature Index
Legal aspects of health and health documentation	(Above source)
Medical or health topics	Psychological Abstracts; Biological Abstracts
Topical or curriculum researches or annotated bibliographies	ERIC system or any other library sources
Any medical topics--diabetes, clinical chemistry instrumentation	
Medical technology	Williams and Lundberg, Introduction to the Profession of Medical Technology
JCAH requirements; Medicare conditions of participation	TCAH Manual; COP Manual
Management by objectives	

Subjects and Sources for Library Research and Composition Suggested by Illinois State Faculty in the Department of Home Economics

Subject	Source
Effect of inflation on families and how to cope with it	
Any consumer issues, such as government regulations	
Teaching/learning theory	
Job preparation, placement, and satisfaction	
Careers	Resource Lab in Turner Hall
Review of technical articles	
Child development research; family research	Sussman, Young Children; NAEYC journals, Journal of Marriage and Family
Administration of programs	Handbook of Educational Supervision
Clothing and behavior; for example, Why do we wear clothes? What do clothes communicate?	Home Economics Research Journal; Perceptual and Motor Skills; Social Science Citation Index
Textiles--fibers, fabric construction, finishes, dyeing and printing, labeling	American Fabrics and Fashions; Textile World Retailweek
Giving directions for completing a technical task or process	Technology textbooks
Explanation of how a technical device functions	Existing knowledge of the writer

Subjects and Sources for Library Research and Composition Suggested by Illinois State Faculty in the Department of Industrial Technology

Subject	Source
Any safety topic of interest to the student	
Potential of using solar heating as a method for heating shelters	Tully, Solar Systems (McGraw Hill, 1981)
The impact of satellites on communication	Periodicals
Trends in accidental death by age category, 1961-81	National Safety Council, Accident Facts (Annual); Federal reports
The effect of OSHA law on worker safety	(Above periodicals)
Plastics technology	Periodicals such as Modern Plastics; Plastic Technology; Plastics Engineering; Plastics World; Plastics Design Forum (best of the preceding list)
Industrial processing	Journals such as Production; Iron Age
How a knowledge of graphic arts will improve students' future employability	Graphic Arts Monthly; Inplant Printer
History of a particular technology	
Positive and negative effects of technology	
Contemporary industrial processes	
New industrial materials	

Department of Industrial Technology
Subjects and Sources (continued)

Subject	Source
Architectural styles	
Numerical control machines	
Topics of occupational safety such as machine guarding, electrical safety, crane handling, pressure vessels	National Safety News; Professional Safety; National Fire Protection Association; National Safety Council
Topics concerning occupational health--noise, dermatosis, radiation, ergonomics, biological hazards	American Industrial Hygienists Association; NIOSH publications; OSHA documents
The social costs of technology on society	
Futurism in technology	
Energy and power (energy sources, conversion devices, conservation)	Science; Wall Street Journal; OMNI; Solar Age; Technology Review; National Geographic
Industrial plastics	(See sources for plastics technology above)
Future manpower needs for the graphic communications industry	GAFT; Kodak Manpower Study
Responses of societal groups to change, technology	Journals and texts in sociology, psychology, management

Subjects and Sources for Library Research and Composition Suggested by Illinois State Faculty in the Department of Biology

Subject	Source
Recent discoveries in science	Scientific American
Basic principles of science, for example, evolution, homeostasis, the "cell"	Basic textbooks; Scientific American; Science; speciality journals
Locomotion, flight, pipedal, swimming	(Same as above sources)
Biological basis for medical treatments	Physiology and anatomy textbooks; journals such as New England Journal of Medicine
Interdependency of the organisms in the living world: energy for life	Ecological texts; plant physiology textbooks; journals
Use of wastewater as recycled water for future use	Reference books
Role of fungi in sod ecosystems	Journal articles
Theories of evolution	Behavior Evolution (journal)
Ecological relationships--community organization	Ecology; Ecological Monographs
Conservation of endangered species	Current periodicals in wildlife management; Science; Nature; Natural History
Nature vs. nurture: the effect of heredity on behavior	E. O. Wilson, "On Human Nature"

Subjects and Sources for Library Research and Composition Suggested by Illinois State Faculty in the Department of Chemistry

Subject	Source
Nuclear power, processing of nuclear fuels	Scientific American; Journal of Education; Science; Science News; American Scientist; Physics Today; various chemical reviews and monographs but no encyclopedias
Environmental aspects of chemistry, for example, air pollution, photochemical smog, acid rains	Environmental Science and Technology and above journals
Spliced genes	Scientific American; Science
Biochemical basis of cancer	Scientific American; Science
The evolution of the periodic chart	
A comparison of acid-base concepts	
Intermolecular forces	Linus Pauling
Topics in chemistry related to consumer interests	Encyclopedia of Science/ Technology; Science/Technology Abstracts; Chemical Abstracts

Subjects and Sources for Library Research and Composition Suggested by Illinois State Faculty in the Department of Geography-Geology

Subject	Source
Causes of patterned ground in periglacial environments	Geologic history of the development of Lake Michigan
One physical property of mineral	Book on mineralogy
One surficial process	Texts on physical geology

Subjects and Sources for Library Research and Composition Suggested by Illinois State Faculty in the Department of Physics

Subject	Source
Time--its role in relativity	Textbooks in modern physics; popular articles or books about Einstein
Superconducting solids	Science; Scientific American; Discovery
Topics relating to energy use; the supply of fossil and other fuels; pollution; growth of consumption; social and economic aspects of energy use; solar energy; nuclear energy; the history of nuclear energy	

Subjects for Composition Using Empirical Research or Coursework Projects as Suggested by Illinois State Faculty in Science and Technology

Subject	Source
Suggestions from the Department of Agriculture	
Alcohol production	
Changes in size of farms in the United States from 1880 to 1980	U.S. Census and U.S. Agriculture Census
Feeding buffers to dairy cows	Council of Biology Editors Style Manual, 4th ed.
Comparison of agriculture of developing countries with agriculture in the U.S.	George M. Foster, Traditional Societies and Technological Change, 2nd ed.; One Hundred Years of Farm Journal by the editors of Farm Journal; McGraw-Hill Encyclopedia of Food, Agriculture and Nutrition; Another Revolution in U.S. Farming? (USDA) Agriculture in India (Asia Publishing House) Sir Harold Tempary and D. H. Grist, An Introduction to Tropical Agriculture
Solar energy, alcohol fuels, wind energy	
Suggestions from the Department of Health Science	
Has the use of problem-oriented medical records been successful? What other fields have expanded or modified its usage?	

Suggestions from the Department of Home Economics	
Chart performance of children by computer in physical development as compared with Gesell scores and plan a program of progressive physical development for each child	
Perform a technical task and explain how it works by using facts from a reference book	
Suggestions from the Department of Industrial Technology	
Determine the relative conductivity, hardness, strength, etc., of materials	
Attitudes of ISU students about relationship of alcohol to traffic collisions	Previous surveys; periodicals
Laboratory reports; term paper assignments	
Research on process performance	
Design projects	
Relation of carbon content and hardness in ferrous metals	American Society for Metals Handbook; Society for Plastics Engineering Handbook
Suggestions from the Department of Biology	
Reclamation of strip-mine land	
Laboratory exercises in general ecology, for example, forest analysis, stream fauna, and food chains	Laboratory manuals

Any subject in biology, as long as clearcut hypothesis and alternate hypotheses can be formulated and empirically tested. Use of scientific method and generation of testable hypotheses are most important.	How to Write and Publish a Scientific Paper by Robert A. Day

Suggestions from the Department of Chemistry

Project in Chemistry 200

Report on project in Chemistry 290

(Comments from faculty in Chemistry: (1) Perhaps concurrent enrollment in Research in Chemistry and English or Research in Biology and English would be an idea to pursue. (2) If I had my way, no student would be able to graduate as a major in chemistry without having had a technical writing course from the English Department preferably before writing laboratory reports as upperclassmen.)

Suggestions from the Department of Geology-Geography

Tests of physical properties of minerals	Mineralogy texts

Suggestions from the Department of Physics

Pendulum clock, at rest and accelerated